

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 5 1. (Previously presented) An X-ray microscope which includes a device for generating X-rays, a lens for forming an image of an object, and an X-ray detector for detecting an image of the object, the device for generating X-rays provided with:
- means for producing a fluid jet having a curvilinear
 - 10 cross-section,
 - means for forming a focused radiation beam whose focus is situated on the fluid jet,
- said focused radiation beam comprising a beam of electrically charged particles.
- 15 2. (Previously presented) An X-ray microscope as claimed in Claim 1, wherein the beam of electrically charged particles comprises an electron beam.
- 20 3. (Previously presented) An X-ray microscope as claimed in Claim 1, wherein the cross-section of the fluid jet in the direction of the focused beam is smaller than that in the direction transversely thereof.
- 25 4. (Previously presented) An X-ray microscope as claimed in Claim 1, wherein the fluid jet consists essentially of liquid oxygen or nitrogen.

5. (Previously presented) An X-ray microscope as claimed in Claim 1, wherein the means for producing a focused beam of electrically charged particles comprises an electron gun for a cathode ray tube, the X-ray microscope including a condenser lens disposed between the fluid jet and an object to be imaged by means of the X-ray microscope.

6. (Previously presented) An electron microscope comprising means for producing a focused electron beam, a device for generating X-rays, a lens for forming an image of an object, and a detector for detecting the image of the object, said device for generating X-rays including:

- means for producing a fluid jet having a curvilinear cross-section, and
- means for directing the focus of the electron beam onto the fluid jet.

7. (Previously presented) An electron microscope as claimed in Claim 6 and including an X-ray microscope, said device for generating X-rays acting as the X-ray source for the X-ray microscope.

8. (Previously presented) An electron microscope as claimed in Claim 6, the electron microscope being a scanning electron microscope.